

Sacramento - San Joaquin Delta Water Issues

Presented to:

Honorable Bruce Babbitt, Secretary, Department of the Interior
and
Honorable Dianne Feinstein, U.S. Senator



Briefing by:
San Joaquin Agricultural Water Users

August 2, 1993

BIOGRAPHIES

Fred Starrh; Mr. Starrh is President of Kern County Water Agency's Board of Directors. He has farmed in Kern County for over 40 years, growing a variety of annual and tree crops. He is a Trustee of the Kern County High School District, a director of the Cotton Council International, a member of the San Joaquin Valley Cotton Board, Vice-Chairman of Calcot, Ltd., past-president of Western Growers Association, and past-Director of the California Farm Bureau.

Larry Turnquist; Mr Turnquist is President of Westlands Water District, the largest individual water district in the United States, and the largest individual contractor for federal Central Valley Project water. Growing up in Los Angeles, Mr. Turnquist bought land on the west side of the San Joaquin Valley because of his long-time interest in farming. Mr. Turnquist has farmed in Westlands Water District for more than 20 years, growing a diversity of annual crops. He has served on the Westlands Water District Board of Directors since 1984.

Thomas N. Clark; Mr. Clark is General Manager of Kern County Water Agency (KCWA), the largest agricultural contractor for State Water Project (SWP) water, and the third largest municipal contractor for SWP water. KCWA has an annual entitlement to SWP water of more than 1.1 million acre-feet, and provides water service to over 600,000 acres of farmland. Mr. Clark is an appointed member of the Bay-Delta Oversight Council, and Vice President of the State Water Contractors organization, which represents 28 SWP contractors. A third-generation Californian, his family has resided in Kern County for more than 100 years.

Richard M. Moss; Mr. Moss is Manager of Friant Water Users Authority (FWUA), a joint powers authority which operates the Friant-Kern Canal under contract to the U.S. Bureau of Reclamation. The Friant-Kern service area provides water service to 1,000,000 acres of farmland along the east side of the San Joaquin Valley, providing about 1.4 million acre-feet of supplemental water.

Daniel Nelson; Mr. Nelson is Manager of San Luis-Delta Mendota Water Authority. The joint powers authority represents 39 agencies receiving water service via the Delta-Mendota Canal. The Authority's service area encompasses 1,200,000 irrigated acres and 150,000 acres of wetlands, delivering 3.2 million acre-feet of supplemental water. The Authority, under contract to the U.S. Bureau of Reclamation, will soon be providing operations and maintainance services for all CVP facilities from the Tracy pumping plant to the terminous of the Delta-Mendota Canal. Mr. Nelson is a member of the Bay-Delta Oversight Council, and is a member of the Board of Directors of the Water Education Foundation. He is a sixth-generation Californian.

Jason Peltier; Mr. Peltier is Manager of Central Valley Project Water Users Association (CVWUA). CVWUA represents CVP contractors from Bakersfield to Redding in the Central Valley and in the San Francisco Bay area. The CVP serves about 6.0 million acre-feet of supplemental water to 3,000,000 acres of farmland (one-third of the irrigated land in California), and about 0.5 million acre-feet for urban uses. Mr. Peltier has served as Assistant to the Regional Director, U.S. Bureau of Reclamation in Sacramento.

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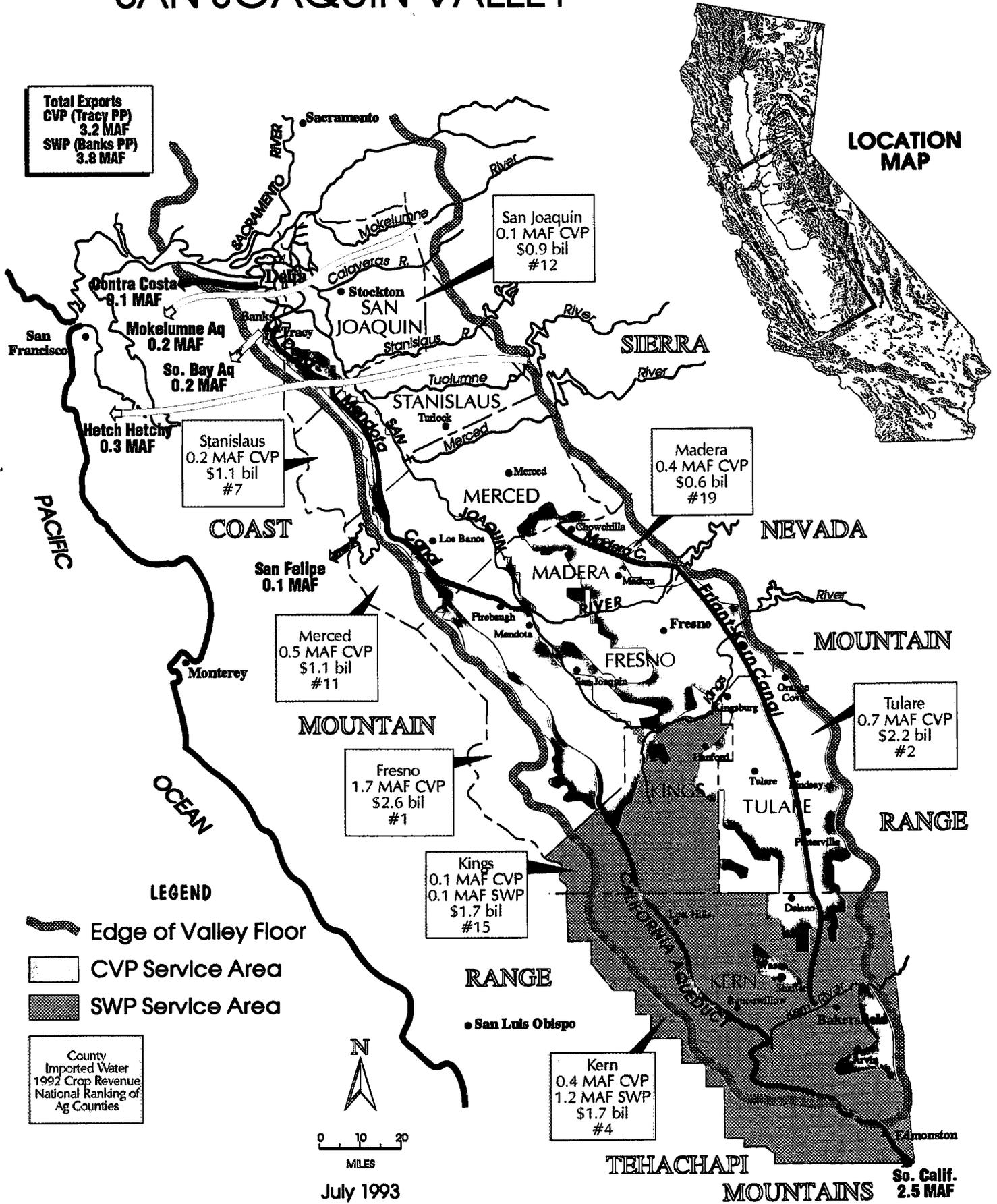
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Introduction

SAN JOAQUIN VALLEY



Total Exports
CVP (Tracy PP)
 3.2 MAF
SWP (Banks PP)
 3.8 MAF

LOCATION MAP

San Joaquin
 0.1 MAF CVP
 \$0.9 bil
 #12

Madera
 0.4 MAF CVP
 \$0.6 bil
 #19

Stanislaus
 0.2 MAF CVP
 \$1.1 bil
 #7

Merced
 0.5 MAF CVP
 \$1.1 bil
 #11

Fresno
 1.7 MAF CVP
 \$2.6 bil
 #1

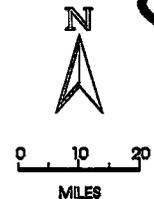
Kings
 0.1 MAF CVP
 0.1 MAF SWP
 \$1.7 bil
 #15

Tulare
 0.7 MAF CVP
 \$2.2 bil
 #2

Kern
 0.4 MAF CVP
 1.2 MAF SWP
 \$1.7 bil
 #4

- LEGEND**
- Edge of Valley Floor
 - CVP Service Area
 - SWP Service Area

County	Imported Water	1992 Crop Revenue	National Ranking of Ag Counties
Contra Costa	8.1 MAF		
Mokelumne Aq	0.2 MAF		
So. Bay Aq	0.2 MAF		
Hetch Hetchy	0.3 MAF		
Stanislaus	0.2 MAF CVP	\$1.1 bil	#7
San Felipe	0.1 MAF		
Merced	0.5 MAF CVP	\$1.1 bil	#11
Fresno	1.7 MAF CVP	\$2.6 bil	#1
Kings	0.1 MAF CVP 0.1 MAF SWP	\$1.7 bil	#15
San Joaquin	0.1 MAF CVP	\$0.9 bil	#12
Madera	0.4 MAF CVP	\$0.6 bil	#19
Tulare	0.7 MAF CVP	\$2.2 bil	#2
Kern	0.4 MAF CVP 1.2 MAF SWP	\$1.7 bil	#4
So. Calif.	2.5 MAF		



July 1993

TEHACHAPI MOUNTAINS
So. Calif. 2.5 MAF

Water Setting Today

State Water Project

Contract Entitlements: 4.2 MAF

Current Yield: 2.3 MAF

Serves: 15 million people, 1.8 million acres of farmland.

Key Features: Oroville Res. (presently storing 3.3 out of 3.5 MAF capacity), Delta pumping plant (13,000 cfs capacity), California Aqueduct (500 miles long), half of San Luis Res.

Construction began in 1960, \$1.75 billion capital investment.

Central Valley Project

Historic Yield: 7.5 - 8.5 MAF

Serves: 4 million people, 3 million acres of farmland.

Key Features: Shasta Res. (presently storing 4.0 out of 4.5 MAF capacity), Trinity, Folsom, Friant, New Melones Res., Delta pumping plant (4,600 cfs capacity), Tehama-Colusa, Contra Costa, Delta-Mendota, San Luis, Friant, Madera Canals (400 miles combined length), half of San Luis Res.

Construction began in 1938, \$3 billion capital investment.

Delta Dependent

These multi-purpose projects are operationally dependent upon the Sacramento-San Joaquin Delta. Combined, they provide about one-third of all the water used in California. They supply water to over one-half of the people and about one-half of the irrigated farmland in California.

Water Setting Today (continued)

Capability

CVP: Prior to the recent drought (when shortages of up to 75% were sustained over five years), shortages were experienced only once in the forty year history of the CVP.

Annual groundwater overdraft of about 1 MAF in the CVP's service area; unmet water needs of 3.5 MAF identified by USBR. In 1993 (150% of normal water year) 1 million acres experiencing a 50% cutback in water supplies. Cost of CVP water to most farmers is \$30 - \$60 per acre-foot.

SWP: Presently, the SWP can deliver full contracted supplies only 60% of the time. Cost of SWP water to most farmers is \$50 - \$80 per acre-foot.

During the recent 1987-92 drought, SWP agricultural contractors suffered cutbacks in 1990-92 totaling 55%, 100% and 50%. Over 250,000 irrigated acres were fallowed due to lack of water. The economic loss exceeded \$500 million, with nearly 10,000 jobs lost.

In order to provide a more reliable water supply to its customers, the state has identified two key opportunities: (1) pumping winter high flows south to new offstream storage, and (2) transfers of additional summer water purchased from others.

Planning for these future efforts has been greatly reduced or eliminated due to the uncertainty associated with Delta exports.

Delta Export Operations and Uncertainty

While there are many biological, hydrologic and human activities that affect listed endangered species in the Delta, most management efforts have focused on the two Delta export pumping operations. EPA activities also focus on Delta operations. CVPIA, while unclear at present, will impact the whole of water management in California.

Impacts of 1991 Drought on San Joaquin Valley Agriculture

- ★ 253,000 acres of cropland idled.
- ★ 125,000 acres with reduced yields.
- ★ Loss of \$281 million in farm revenues.
- ★ Loss of \$264 million in related business revenue.
- ★ Surface water deliveries declined 5.9 MAF.
- ★ Groundwater use increased 5.1 MAF.
- ★ Over 9,000 agricultural or agricultural induced jobs lost.
- ★ Surface water costs increased 50%.
- ★ Groundwater costs increased 88%.

Overview

- ★ Management of water resources in California has always been contentious and divisive.
- ★ Agricultural, urban and environmental water needs are increasingly competitive.
- ★ Federal statutory authorities dominate management of California water resources today:
 - Endangered Species Act
 - CVP Improvement Act
 - Clean Water Act
- ★ Lack of a comprehensive federally coordinated, policy-driven plan with common objectives will lead to a "train wreck".
- ★ Federal actions must be driven by broadly balanced, economically sensitive and biologically realistic policies.
- ★ Apparent lack of "linkage" between administrative policy and field implementation.

Importance of San Joaquin Valley Agriculture, Jobs and the Economy

California Agricultural Employment

- ★ *California*: 1 out of every 10 jobs are agricultural or agriculturally induced.
- ★ *Central Valley*: 3 out of every 10 jobs are agricultural or agriculturally induced.
- ★ *San Joaquin Valley*: 4 out of every 10 jobs are agricultural or agriculturally induced.
- ★ *Rural communities*: in some cases, nearly every job is agricultural or agriculturally induced. Remove the water that supports agriculture and rural economies can be wiped out.
 - ★ Mendota (every single job is ag or ag induced)
 - ★ Arvin (9 out of every 10 jobs)
 - ★ Lost Hills (9 out of every 10 jobs)
 - ★ Orange Cove (9 out of every 10 jobs)
 - ★ San Joaquin (9 out of every 10 jobs)
 - ★ Buttonwillow (8 out of every 10 jobs)
 - ★ Delano (8 out of every 10 jobs)
 - ★ Firebaugh (8 out of every 10 jobs)
 - ★ Lindsay (7 out of every 10 jobs)
 - ★ Wasco (7 of every 10 jobs)
 - ★ Shafter (6 out of every 10 jobs)
 - ★ Hanford (5 out of every 10 jobs)
 - ★ Porterville (5 out of every 10 jobs)
 - ★ Turlock (5 out of every 10 jobs)

Source: 1990 Census Data, Calif. Dept. of Finance

The Nation's Leading Agricultural Producing States

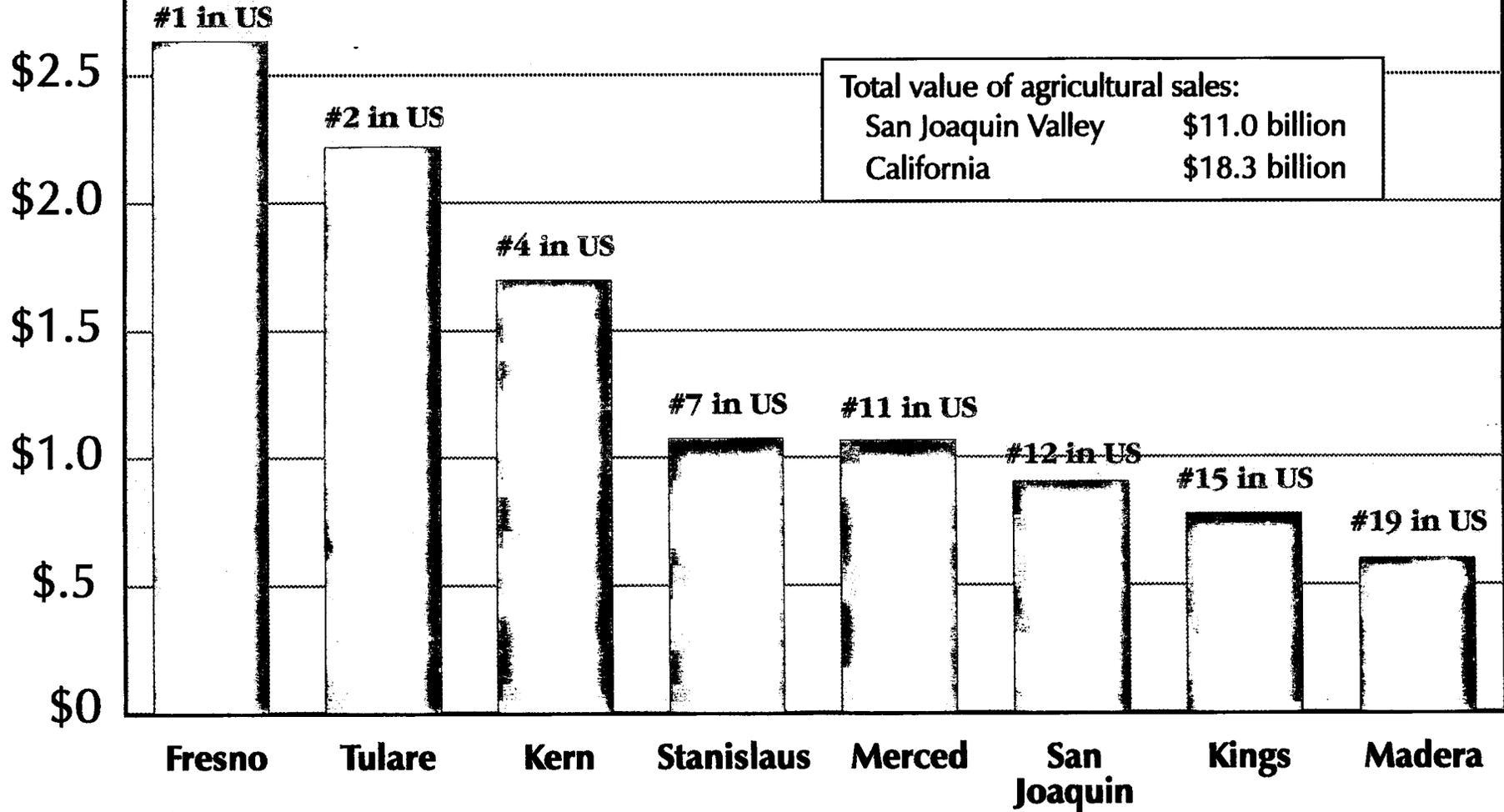
	Value of Production (\$billion)	Percent of U.S. (%)
Top Five Crop and Livestock Producing States		
U.S.	167.3	100
<i>California</i>	17.9	10.7
Texas	12.1	7.2
Iowa	10.2	6.1
Nebraska	8.8	5.3
Illinois	7.5	4.5
Top Five Crop Producing States		
U.S.	80.5	100
<i>California</i>	12.6	15.7
Illinois	5.2	6.4
Florida	5	6.2
Iowa	4.5	5.5
Texas	4.2	5.2
Top Five Livestock Producing States		
U.S.	86.7	100
Texas	7.9	9.1
Nebraska	5.9	6.8
Iowa	5.7	6.6
<i>California</i>	5.3	6.1
Kansas	4.8	5.5

1992 Value of Agricultural Sales San Joaquin Valley

Billion Dollars

\$3.0

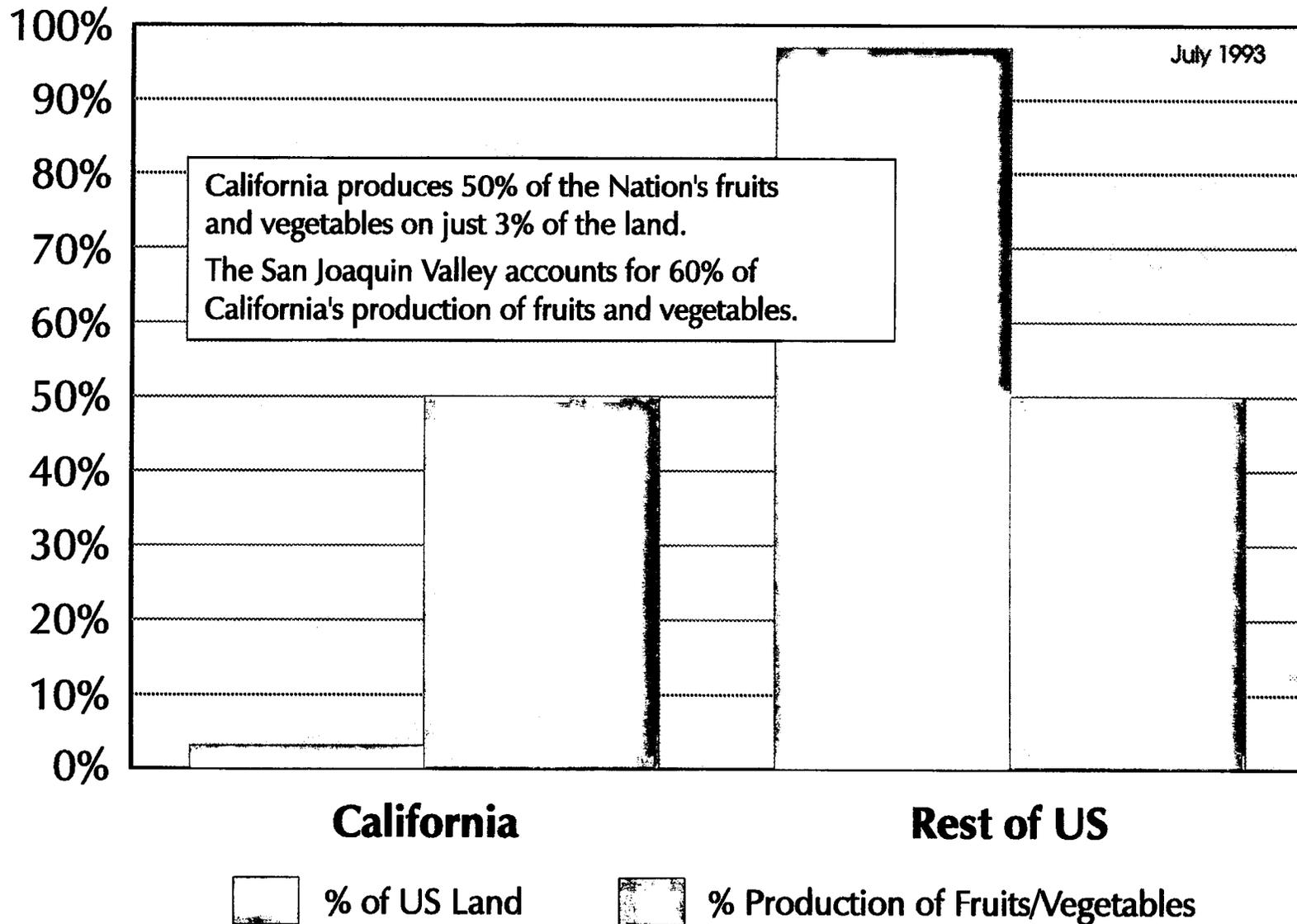
July 1993



Source: 1992 Agricultural Commissioner's Report
1991 California Agricultural Statistical Review
1987 Census of Agriculture



Percentage of Total U.S. Production of Fruits and Vegetables vs. Agricultural Acreage



Source: California Farm Water Coalition

California's 1991 Agricultural Production

Commodity	Harvested Acreage	Value of Production (\$1,000)	National Ranking	Calif. % of US Production	SJV % of US Production	Value of CA Export (\$1,000)
Field and Seed Crops	4,381,300	\$2,681,400				\$982,800
Alfalfa Seed	68,000	\$50,400	1	38	26	\$6,600
Barley	160,000	\$23,600	10	2	1	\$2,000
Dry Beans	144,000	\$87,600	5	10	7	\$27,300
Corn for Grain	115,000	\$58,000	25			\$711,900
Cotton Lint	1,041,000	\$875,600	2	15	15	\$14,200
Cotton Seed	-	\$111,600	2	15	15	\$96,700
Hay, All	1,680,000	\$681,200	2	8	2	
Oats	35,000	\$4,000	20	1		
Potatoes	45,700	\$163,200	9	5	55	
Rice	325,000	\$185,200	2	16	1	\$62,500
Sugar Beets	159,000	\$163,400	3	13	6	
Sweet Potatoes	8,200	\$41,100	3	13	2	
Wheat	442,000	\$116,800	16	2	1	\$61,600
Other Field Crops	138,400	\$109,600				
Fruits and Nuts	2,060,800	\$4,902,100				\$1,308,400
Almonds	380,000	\$540,500	1	100	82	\$411,900
Apples	31,600	\$180,800	4	8	3	
Apricots	17,300	\$32,200	1	94	72	\$7,800
Avocados	74,200	\$191,800	1	87	1	\$7,500
Cherries, Sweet	10,800	\$33,800	3	24	20	\$9,800
Dates	5,200	\$21,300	1	100		\$6,000
Figs	15,800	\$13,500	1	100	100	\$2,600
Grapefruit	18,300	\$47,200	2	14		\$12,300
Grapes	635,500	\$1,558,700	1	90	72	\$318,800
Kiwifruit	7,200	\$23,600	1	100	100	\$6,300
Lemons	46,700	\$245,400	1	78	9	\$75,300
Nectarines	25,900	\$86,500	1	97	94	
Olives	29,700	\$36,500	1	100	69	\$800
Oranges	178,100	\$380,600	2	15	11	\$142,000
Peaches	54,100	\$188,000	1	61	53	\$13,400
Pears	23,400	\$83,400	2	35	3	\$3,300
Pecans	2,600	\$3,000	12	1		
Pistachios	52,100	\$96,300	1	100	100	\$32,100
Plums	42,100	\$97,800	1	90	90	\$27,800
Prunes	80,000	\$178,400	1	100	11	\$95,600
Strawberries	21,100	\$465,900	1	80	2	
Tangerines	7,500	\$27,200	2	20	3	\$5,100
Walnuts	181,000	\$279,700	1	99	54	\$130,000
Other Fruits and Nuts	120,700	\$92,100				
Vegetables	1,027,900	\$3,477,500				\$294,200
Asparagus	33,500	\$73,300	2	42	24	\$21,800
Broccoli	88,000	\$215,500	1	90	8	\$37,700
Carrots	56,000	\$201,100	1	56	36	\$21,700
Cauliflower	42,000	\$145,100	1	78	7	\$35,200
Celery	20,900	\$143,800	1	73		\$19,700
Corn, Sweet	16,900	\$31,900	3	13	3	
Cucumbers	4,200	\$12,600	4	9	4	
Lettuce	152,000	\$600,800	1	72	12	\$49,100
Melons	18,200	\$39,700	1	68	24	\$11,900
Mushrooms	600	\$127,800	2	19		
Onions	36,600	\$130,400	1	27	24	\$44,900
Tomatoes, Fresh	40,000	\$235,000	2	28	19	\$22,100
Tomatoes, Processed	312,000	\$640,100	1	91	50	\$30,100
Other Vegetables	207,600	\$880,400				
Nursery Crops	6,000	\$1,935,600				
Nursery Products	6,000	\$1,256,000	1	20	5	
Flowers and Foliage	-	\$679,600				
Livestock		\$2,433,600				
Cattle and Calves	-	\$1,681,600	7	5	1	\$6,200
Chickens	-	\$336,400	8	4	2	
Hogs and Pigs	-	\$45,200	26			
Sheep and Lambs	-	\$41,000	2	10	5	\$2,500
Turkeys	-	\$241,400	3	11	11	\$3,900
Aquaculture	-	\$11,500				
Other Livestock and Poultry	-	\$76,500				
Livestock Products		\$2,838,500				
Honey		\$17,700	1	15	6	
Milk and Cream		\$2,454,500	2	15	9	
Wool		\$4,000	3	8	4	
Eggs, Chicken		\$362,300	1	11	3	
Grand Total	7,456,000	\$18,268,700				\$4,189,000

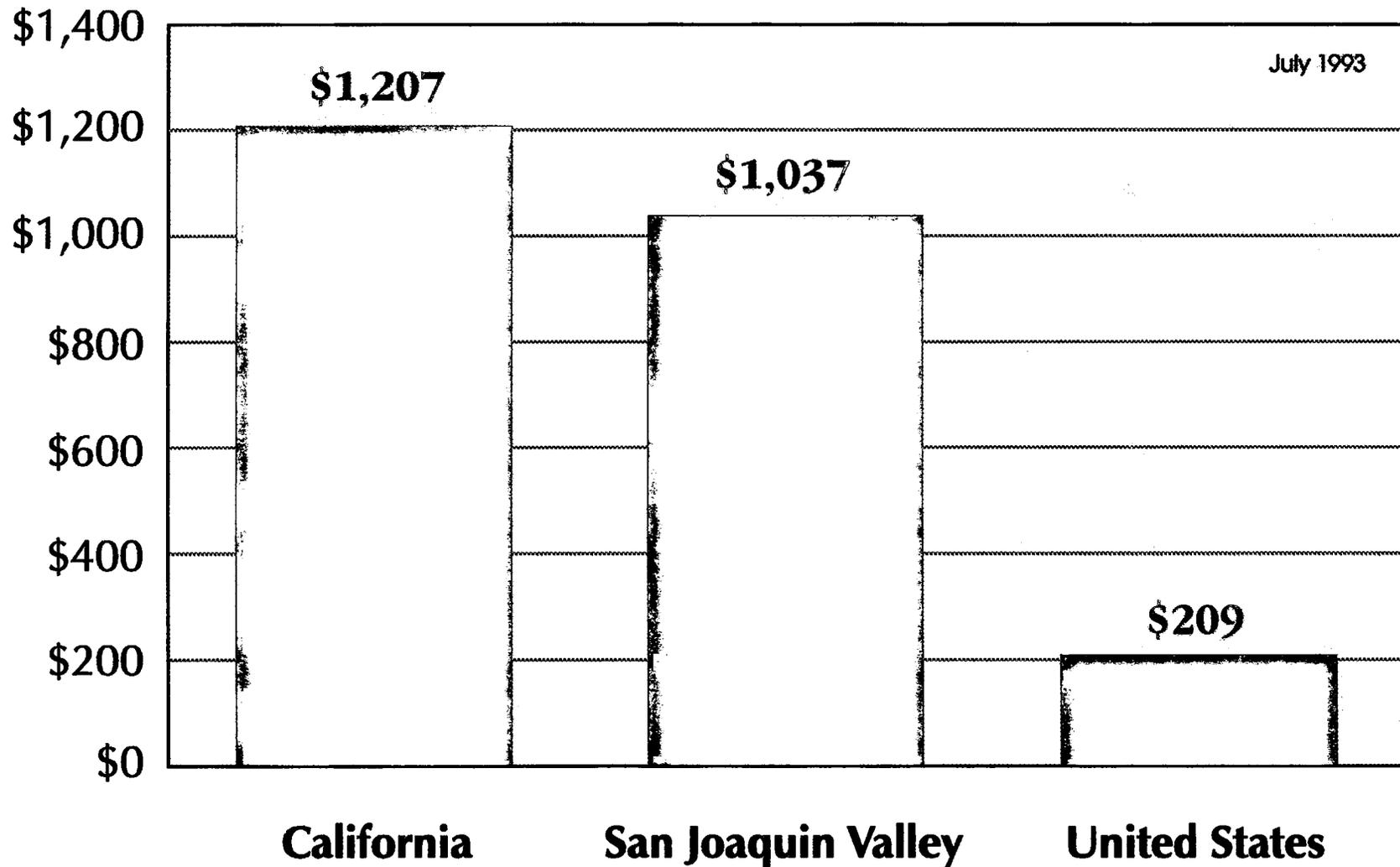
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California's share of U.S. production is greater than 50%.

San Joaquin Valley's share of U.S. production is greater than 50%.

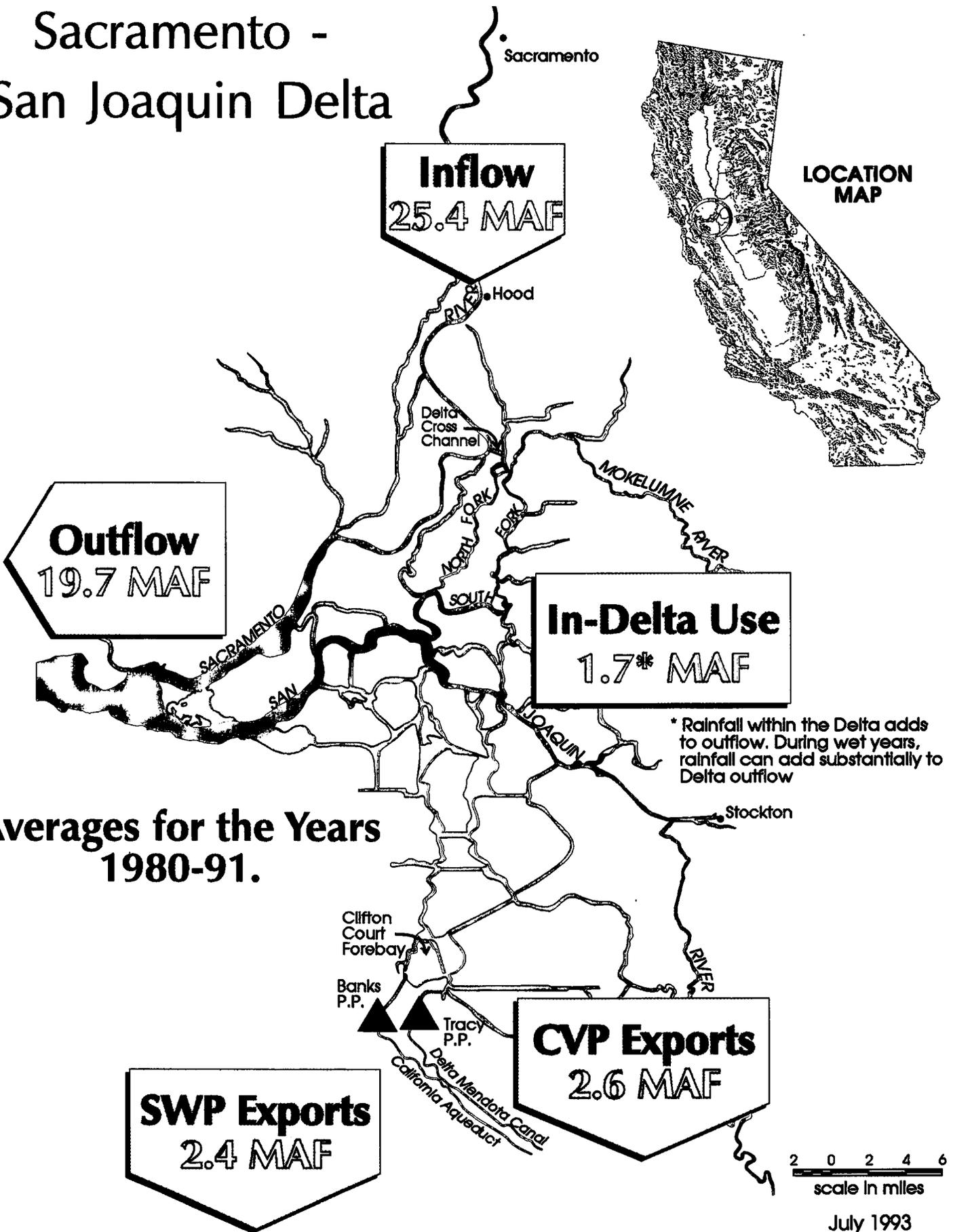
California's Average Value per Crop Acre is Over Five Times Higher Than the U.S. Average



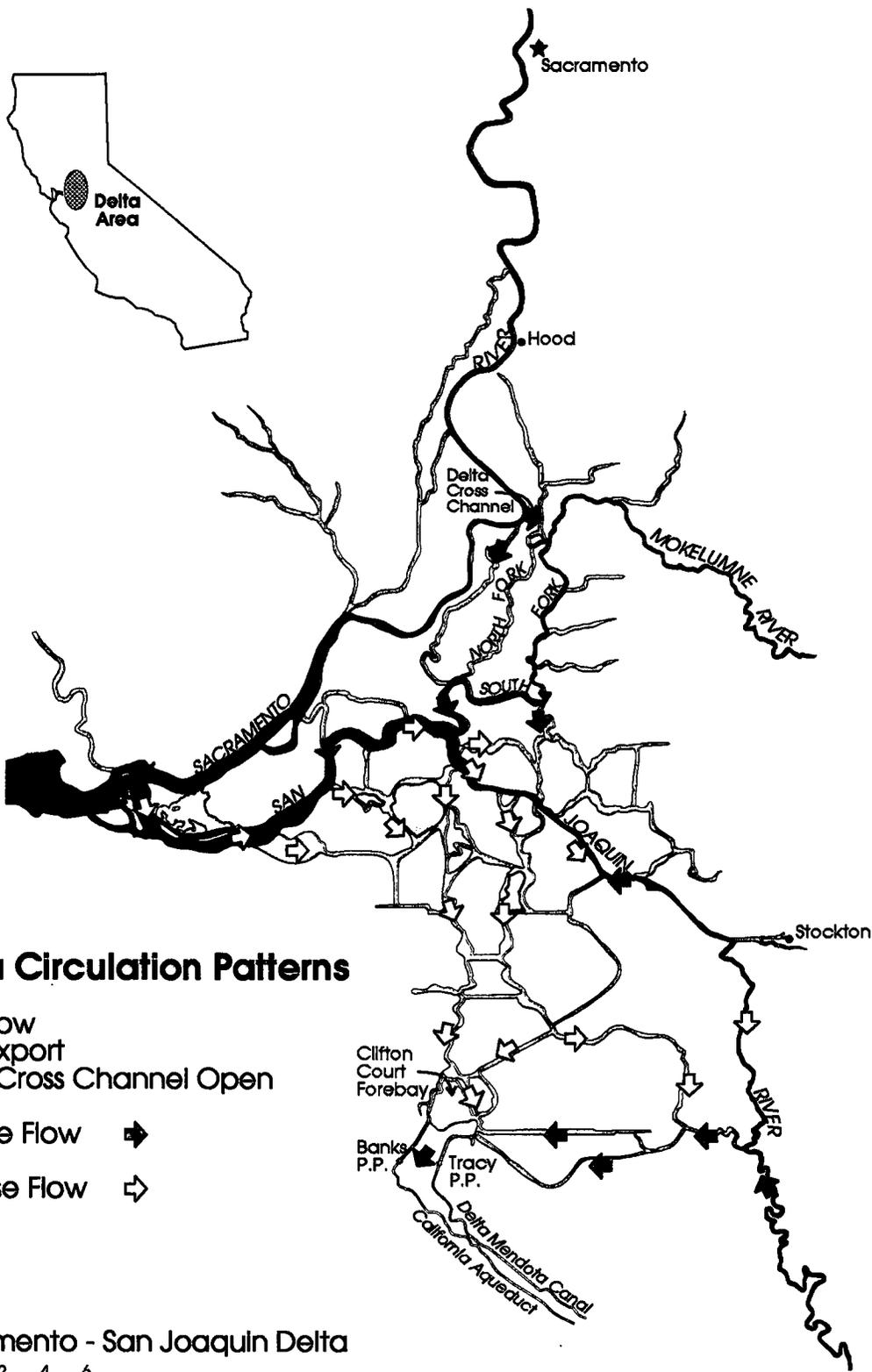
Source: 1987 Census of Agriculture

Delta and San Joaquin Valley Water Supplies

Sacramento - San Joaquin Delta



Delta Waterways 1993



Delta Circulation Patterns

Low Flow
High Export
Delta Cross Channel Open

Positive Flow →

Reverse Flow ⇨

Sacramento - San Joaquin Delta

2 0 2 4 6
scale in miles

Total Water Supplies in the San Joaquin Valley (1980-1990 Average)

County	Imported Supplies		Local Supplies				Total
	Surface Water		Surface Water		Groundwater		
	(TAF)	%	(TAF)	%	(TAF)	%	(TAF)
Stanislaus	197	11	1,072	57	596	32	1,865
San Joaquin	NA	NA	916	56	721	44	1,637
Merced	740	30	814	33	884	36	2,438
Madera	421	40	34	3	600	57	1,055
Fresno	1,811	39	932	20	1,908	41	4,651
Kings	347	17	482	23	1,242	60	2,071
Tulare	667	25	530	20	1,450	55	2,647
Kern	1,433	41	729	21	1,356	39	3,518
Total	5,616	28	5,509	28	8,757	44	19,882

Source: CA Dept. of Water Resources Bulletin 160-93, Administrative Draft

Threats to San Joaquin Valley Delta Water Supplies

Sacramento-San Joaquin Delta Export Water Needs*

(million acre-feet)

	CVP	SWP	Total
SJV Agricultural Use	2.90	1.20	4.10
Coastal M&I Use	0.15	2.60	2.75
U.S. Game Refuges	0.15	--	0.15
Total Delta Exports	3.20	3.80	7.00

Factors Affecting San Joaquin Valley Delta Water Supplies**

(thousand acre-feet)

	<u>Potential **** Reductions</u>
Drought	?????
Ag-first contract shortage provisions**	?????
Ag water transfers to urban areas (P.L. 102-575 & State legislation)	?????
State Water Resources Control Board Bay-Delta Standards	?????
Clean Water Act (EPA Region IX)	700-3,000
San Francisco Bay Estuary Project (EPA Region IX)	?????
P.L. 102-575 (Interior, USBR, USF&WS)	
Up-front water to environment	800
Dedication of water to Trinity River	220
Increase in Waterfowl Refuge water supplies	250
Goal to double anadromous fish populations	?????
Endangered Species (Interior: USF&WS, Commerce: NMFS)	
Winter Run Chinook Salmon (NMFS)	560
Delta Smelt (USF&WS)	1,000-1,500
Longfin Smelt*** (USF&WS)	?????
Sacramento Splittail Smelt*** (USF&WS)	?????
San Joaquin River Fall Run Chinook Salmon*** (NMFS)	?????
Sacramento River Spring Run Chinook Salmon*** (NMFS)	?????

* Prior to enactment of the Central Valley Project Improvement Act.

** SWP contract provisions impose shortages first on agriculture, giving preference to cities over farms.

*** Future candidates for ESA listing.

**** Reductions may not be additive.

Obligations and Concerns Summary

<u>Obligation</u>	<u>Concern</u>	<u>Lead Agencies</u>
ENDANGERED SPECIES ACT		
DELTA SMELT Section 7 Consultation	Water Supply Uncertainty: Reductions Water - per acre cost increases Biological Accuracy/Efficacy Biological/Economic Balance Water Customer Involvement	U.S. Fish & Wildlife Service U.S. Bureau of Reclamation CA Dept. of Water Resources CA Dept. of Fish & Game
Recovery Plan	Timeliness Implement-ability: <i>Biological, Hydrologic, Regulatory, Operational and Economic</i> Openness: <i>Public Input</i> Long-Term Solutions: <i>Comprehensive, Coordinated</i> Recovery Team Membership	
WINTER RUN SALMON Section 7 Consultation	Water Supply Impacts, Uncertainty Biological, Economic Balance Biological Accuracy, Efficacy State Control of Water Rights Water Customer Involvement	U.S. National Marine Fisheries U.S. Bureau of Reclamation CA Dept. of Water Resources CA Dept. of Fish & Game
Recovery Plan	Timeliness Implement-ability: <i>Biological, Hydrologic, Regulatory, Operational and Economic</i> Openness: <i>Public Input</i> Long-Term Solutions: <i>Comprehensive, Coordinated</i>	
OTHER POTENTIAL LISTINGS		
Longfin Smelt San Joaquin River Fall Run Chinook Salmon Sacramento Splittail Smelt		
CVPIA		
800,000 AF	Allocation and accounting of water Biological Efficacy Operational Efficacy CVP Yield Determination	U.S. Bureau of Reclamation U.S. Fish & Wildlife Service
Programmatic EIS	Complexity/Coordination	
Restoration Fund (\$30 million/yr., \$700 million ttl)	Management Equity Priorities Implement-ability	
Doubling Anadromous Fish		
CLEAN WATER ACT		
	Water Supply Impacts/Uncertainty State Control of Water Rights Biological Accuracy/Efficacy Biological/Economic Balance Cumulative Impacts	U.S. EPA

Delta Goals, Objectives and Solutions

Goals and Objectives

- ★ A clear articulation of goals leading to environmental improvement and economic recovery is required.
- ★ Many decisions are made and implemented in relative isolation without consideration of cumulative biological and economic/social impacts.
- ★ This isolated execution is rationalized because of the various statutes driving decision-making.

Solution

- ★ Federal Coordination: A cabinet-level coordination effort should provide a clear articulation of the need for federal agencies to operate in a coordinated, unified fashion. Clear statements of Administration policies are needed to provide direction.
- ★ Federal-State Coordination: Coordination of policies and regulatory responsibilities must first be coordinated at the highest levels of government with joint Federal-State directives to subordinate agencies which implement these policies.
- ★ Local Coordination/Grassroots: Local government and grassroots organizations must become part of the solution, but should not control the process.
- ★ The "Timber Summit" produced a variety of thoughtful policy statements by President Clinton and Secretary Babbitt---
 - 1) Consider the human and economic dimensions.
 - 2) Protect the long-term health of the environment.
 - 3) Scientifically sound, ecologically credible, legally responsible solutions.
 - 4) Produce predictable, sustainable results.
 - 5) Coordination of federal efforts.

Economic Factors

- ★ The root of much "man vs. environment" conflict arises from real or perceived economic damage incurred because of environmentally-driven regulation/management.
- ★ "Making the ESA work" in CA, both from ESA and Clean Water Act perspectives, depends upon a complete understanding of the biological and economic relationships and consequences.
- ★ Biological and economic factors have two main points of contact:
 1. Local government and private sector impacts resulting from ESA enforcement/management actions.
 2. The admittedly weak biological basis for operational decisions vs. the adverse economic impacts of such decisions leads to increasing public cynicism and frustration.

Solution

- ★ Provide for appropriate consideration of socio/economic impacts in determining management options to meet statutory requirements. Existing legal authorities may not require such analysis, but sound public policy and informed decision-making demands economic impacts be considered.
- ★ Remind the public that most environmental laws have specific goals and that economic disruption and uncertainty will likely reduce ability to finance and implement environmental solutions.

Agency Coordination

- ★ Responsible federal agencies (Interior, Commerce, EPA) need to coordinate with each other.
- ★ State agencies with parallel authorities (Resources, DWR, CDF&G, Cal-EPA, SWRCB) must be integrated into the planning and execution of actions.
- ★ Likewise, local government authorities with parallel or ultimate responsibilities must be folded into the decision-making and management responsibilities.

Solution

- ★ Establish a federal-state management committee (or similar forum) below the cabinet-level coordination body to assure that decision-making is comprehensive and actions are coordinated, efficient, balanced, and complementary.

Closed Process

- ★ Statutory deadlines, historic practices, and the controversial nature of issues before them cause federal agencies to often operate without public input--particularly on ESA activities.
- ★ Making decisions without public involvement has lead to uncertainty, confusion and frustration.
- ★ The charge to the Delta Smelt recovery team has been broadened to include native species, endangered or not. This broader change creates the need for much broader professional and public input.
- ★ Interest groups and water customers often have a unique understanding of the efficacy and impact of implementation options. Early and full consideration of these views will improve effectiveness.

Solution

- ★ Afford water customers "applicant status" to work directly with USBR on Section 7 consultations for Delta Smelt.
- ★ Development of the recovery plan should be accompanied by an exhaustive public involvement plan.
- ★ Expand the membership of the recovery team to include economic and social experts that are independent of the fishery advocates.

Long-Term Answers

- ★ Presently, there seems to be little active thought on how to make water projects (and their historic purposes) compatible with environmental laws.
- ★ CA has a history of conflict and "gridlock" in making decisions to improve the reliability and accomplishments of our water management infrastructures.
- ★ Current actions and controversies have resulted in less water available at higher costs. Resulting uncertainty for the short-term (1-5 yrs.) has virtually destroyed the hope of achieving long-term solutions to environmental and water management problems.
- ★ Long-term issues are often "political dynamite" in California.

Solution

- ★ The Cabinet-level coordination effort must extend its scope and broaden its make-up to include CA officials with the stated purpose of defining a process that will yield agreeable solutions.